Amendments to the Claims:

Please **cancel** claims 1-36 without prejudice to or disclaimer of the underlying subject matter, and please **add** the following claims 37-65:

1-36. (Cancelled)

37. (New) A method for altering the fatty acid composition in a host cell, comprising:

a) transforming a host cell with a recombinant nucleic acid expression construct that comprises a polynucleotide sequence encoding a heterologous β-ketoacyl-ACP synthase and a polynucleotide sequence encoding a heterologous desaturase; and

b) growing said host cell under conditions wherein expression of said heterologous β-ketoacyl-ACP synthase and said heterologous desaturase is initiated, whereby said fatty acid composition is altered relative to a host cell with a similar genetic background but lacking the recombinant nucleic acid expression construct.

38. (New) The method according to claim 37 wherein said heterologous β-ketoacyl-ACP synthase comprises the coding sequence set forth in SEQ ID NO: 1.

39. (New) The method according to claim 37 wherein said heterologous β-ketoacyl-ACP synthase has the amino acid sequence set forth in SEQ ID NO: 2.

40. (New) The method according to claim 37 wherein said heterologous desaturase is a safflower delta-9 desaturase.

41. (New) The method according to claim 37, wherein said recombinant nucleic acid expression construct further comprises a polynucleotide sequence encoding a second heterologous β-ketoacyl-ACP synthase.

42. (New) The method according to claim 41, wherein said heterologous β-ketoacyl-ACP synthase is a *Cuphea pulcherrima* KAS I, and wherein said second heterologous β-ketoacyl-ACP synthase is a *Cuphea pulcherrima* KAS IV, and wherein said heterologous desaturase is a safflower delta-9 desaturase.

43. (New) The method according to claim 37 wherein said host cell is selected from the group consisting of plant cells, bacterial cells, yeast cells, and algal cells.

44. (New) The method according to claim 37, wherein said alteration comprises a reduction in total saturated fatty acids.

45. (New) The method according to claim 37, wherein said alteration comprises a reduction in C16:0 fatty acids.

46. (New) The method according to claim 37, wherein said alteration comprises a reduction of total fatty acids to a level less than about 3.5 weight percent.

47. (New) The method according to claim 37, wherein said β-ketoacyl-ACP synthase and said desaturase are arranged in a monocistronic configuration.

48. (New) The method according to claim 37, wherein said β-ketoacyl-ACP synthase and said desaturase are arranged in a polycistronic configuration.

49. (New) The method according to claim 42, wherein said *Cuphea pulcherrima* KAS I, said *Cuphea pulcherrima* KAS IV, and said safflower delta-9 desaturase are arranged in a monocistronic configuration.

50. (New) The method according to claim 42, wherein said *Cuphea pulcherrima* KAS I, said *Cuphea pulcherrima* KAS IV, and said safflower delta-9 desaturase are arranged in a polycistronic configuration.

51. (New) An oil produced by the method according to claim 37.

52. (New) A method for modifying the saturated fatty acid content in transgenic plant seeds, comprising:

a) providing for expression of a heterologous β-ketoacyl-ACP synthase protein in said transgenic plant, and

b) providing for expression of a heterologous desaturase protein in said transgenic plant,

c) such that said transgenic plant produces a heterologous β-ketoacyl-ACP synthase protein and a heterologous desaturase protein and thereby modifies the saturated fatty acid content in said transgenic plant seeds.

53. (New) The method according to claim 52 wherein said heterologous β-ketoacyl-ACP synthase comprises the coding sequence set forth in SEQ ID NO: 1.

54. (New) The method according to claim 52 wherein said heterologous β-ketoacyl-ACP synthase has the amino acid sequence set forth in SEQ ID NO: 2.

55. (New) The method according to claim 52 wherein said heterologous desaturase is a safflower delta-9 desaturase.

56. (New) The method according to claim 52, wherein said method further comprises providing for expression of a second heterologous β-ketoacyl-ACP synthase protein.

57. (New) The method according to claim 56, wherein said heterologous β-ketoacyl-ACP synthase is a *Cuphea pulcherrima* KAS I protein, and wherein said second heterologous β-ketoacyl-ACP synthase protein is a *Cuphea pulcherrima* KAS IV protein, and wherein said heterologous desaturase is a safflower delta-9 desaturase.

58. (New) The method according to claim 52, wherein said modification of saturated fatty acids is a reduction in total saturated fatty acids.

59. (New) The method according to claim 52, wherein said modification of saturated fatty acids is a reduction in C16:0 fatty acids.

60. (New) The method according to claim 52, wherein said modification of saturated fatty acids is a reduction of total fatty acids to a level less than about 3.5 weight percent.

61. (New) The method according to claim 52, wherein said β-ketoacyl-ACP synthase and said desaturase are arranged in a monocistronic configuration in an expression construct.

62. (New) The method according to claim 52, wherein said β-ketoacyl-ACP synthase and said desaturase are arranged in a polycistronic configuration in an expression construct.

63. (New) The method according to claim 52, wherein said β-ketoacyl-ACP synthase and said desaturase are provided on separate expression constructs.

64. (New) The method according to claim 52, wherein said β-ketoacyl-ACP synthase and said desaturase are provided by crossing a plant line expressing said β-ketoacyl-ACP synthase with a plant line expressing said desaturase.

65. (New) An oil produced by the method according to claim 52.